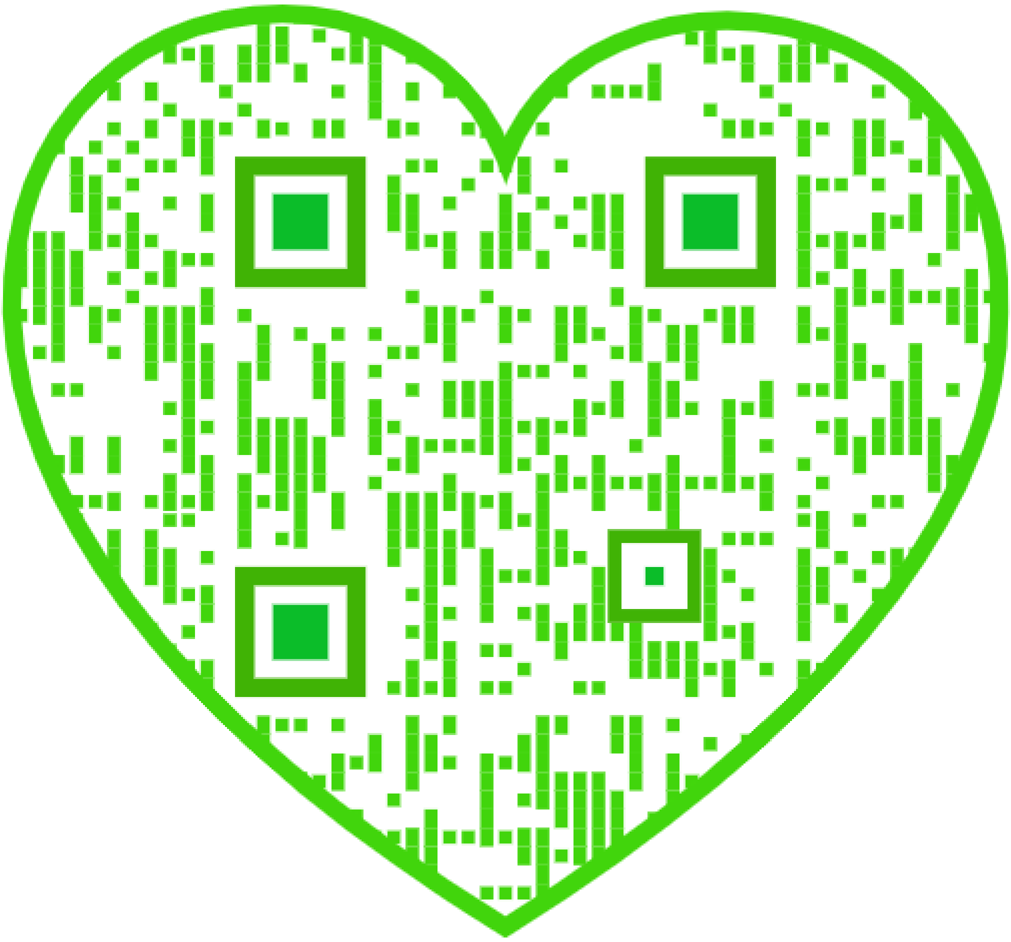
@
SF523
E22



EDINBURGH & EAST OF SCOTLAND COLLEGE OF AGRICULTURE.

BEEKEEPING.

RAPID INCREASE OF COLONIES FOR RESTOCKING PURPOSES.

The Isle of Wight disease, the absence of so many bee-keepers on war service, and the recurrence of poor honey seasons, have combined to reduce the stocks of bees in Scotland to such an extent that the honey harvest will be small for several years to come, and all but an insignificant portion of the honey available will remain ungathered owing to the scarcity of bees. This alone will be a great loss, and when we add to it the reduction in both quantity and quality of our fruit crop for want of bees to perform the work of pollinating, the need for a rapid increase of stocks will be realised.

In these circumstances all bee-keepers should do their utmost to render aid in helping to restock the country by increasing their colonies as fast as possible.

With the war over there is less need for intensive honey production to meet the scarcity of sugar, and the honey gathered by the few stocks still in existence can, for the present, be profitably used to produce more bees. This would not result in financial loss to bee-keepers. Indeed, they would probably gain by it, as the present great demand for bees has resulted in high prices being offered for stocks, swarms, or nuclei, and there is no prospect of the supply being equal to the demand for a year or two at least. While prices remain at or near the present level, bee-breeding will be more remunerative than honey production. Even in a poor honey season, bee-breeding can be maintained by judicious sugar feeding.

Schemes are being devised for the restocking of parts of the country with Dutch, Italian, or American bees. While it is recognised that complete restocking may be done more quickly by this method, the wisdom of it in the long-run is open to doubt for several reasons which obviously cannot be fully discussed in this brief article.

None of the foreign races mentioned are immune from Isle of Wight disease.

It has been stated by some that Dutch bees possess a certain degree of immunity, but such statements are not supported by any scientific proof, and it is well known that in Scotland many cases of failure with Dutch bees have occurred.

Parties interested in the importation and sale of foreign bees are mainly responsible for the statements claiming immunity for these races.

There should be clear and convincing proof, backed by scientifically conducted experiments carried out on a suitable scale, that a substantial advantage is to be gained by the wholesale importation of foreign bees before such schemes are put in force.

Importation of foreign races in the past has, owing to uncontrolled interbreeding with the native race, produced the race of nondescripts which is now common in Britain, and which has been almost wiped out by the Isle of Wight disease.

By importing more races further crossing will be brought about, and it is to be feared that all that remains of the native race will be destroyed.

Bees increase very rapidly under favourable conditions. If the present system of preventing swarming was suspended for a few seasons and stocks encouraged to send out swarms, the colonies of native bees would hold their own and stocks would increase quickly. The owners of apiaries would find a ready sale for all increase at a profitable figure, and at the same time would assist their less fortunate neighbours to restock with home-bred bees.

Where stocks show a disinclination to swarm naturally, artificial swarms may be made by one of the methods explained below.

In making artificial swarms certain conditions are requisite. Colonies which are to be swarmed should be very full of bees, and the swarm should not be made until the natural swarming season is approaching. Artificial swarms made out of season are generally failures. There should be drones on the wing or hatching from the combs. The swarm must be made about noon on a fine day, so that a large number of bees may be on the wing to form the swarm. Honey should be coming into the hive in fair quantity, or liberal feeding must be resorted to as a substitute.

The swarm may be made from one colony or from a number of separate colonies. If only one is to be operated upon the method is simple, but the colony must be a good one. About noon, when bees are flying freely, the hive should be opened and the combs carefully examined until the queen is found. The comb on which she is found should be placed in the centre of an empty hive without disturbing the bees or queen. On each side of this comb three or four frames fitted with foundation combs should be hung and the hive closed. When the bee-keeper has a store of fully-built-out combs in reserve, it is an advantage to use these in preference to frames with foundation only. A spare comb or frame of foundation must be introduced into the space caused by the removal of the comb with the queen and bees from the parent hive. The hive from which the comb was taken should be moved as quickly as possible to a new stand some distance away and the one with the queen put in its place. The flying bees on their return will enter the new hive on their accustomed stand and so will form the swarm.

The hive from which the swarm has been taken will now be queenless, but the bees which remain will at once begin to provide one from a worker larva of suitable age. This young queen will mature in from ten to twelve days from the making of the swarm. Where possible, however, it is better to introduce a fertile queen to a colony which has been swarmed, on the evening of the same day.

A very good swarm can be made from two colonies in the following way:—

On a fine day when bees are flying, open one of the hives and remove therefrom half the combs containing brood. After shaking all the bees off these combs place them in another hive, filling it, and also the hive the combs were taken from, with spare combs or frames fitted with foundation comb. Close up both hives, remove another full colony to a new stand, and place the hive containing the removed combs of brood on the old site. The returning bees will enter and form the swarm. To save time, a fertile queen should be introduced.

Where the bee-keeper has a number of hives a very good swarm can be made by selecting from each one or more combs containing brood, but leaving the most populous to supply the flying bees. All bees should be shaken or brushed from the selected combs back into their respective hives, and the gaps made by the removal of combs filled up with frames of comb foundation. The selected combs of brood should be put into a spare hive, which must be at once placed on the stand of the hive which is to supply the bees for the swarm, and which is now moved to a new stand. The flying bees enter the new hive and form the swarm, to which a fertile queen should at once be given.

In selecting combs from a number of hives for the purpose of making a swarm, careful examination is necessary to make sure that none of such combs is diseased.

Rapid increase can be made by breaking up strong stocks to form four or five nuclei, the latter being gradually built up into full stocks. The following method has been worked successfully in the apiary of the Edinburgh and East of Scotland College at Nether Liberton.

Prepare four spare hives and place them on their permanent stands. On the evening of a fine day, when most of the bees are at home, remove eight combs with the bees on them from a strong colony which is preparing to swarm. Most of these combs will have queen cells on them, and two of them must be placed in each of the four spare hives, taking care to leave the queen in the hive which is being broken up. There will then be five divisions of the hive, or nuclei as they are termed, each with two combs and brood. The one on the original stand has a queen, the other four are queenless, but should have at least one queen cell each on one of the combs. Place the two combs close up to the side of the brood chamber in each of the four new divisions, and on the outside of them put another comb with some honey in it so that each one has three combs, two with brood and bees and one with honey. Cover up all four very close and warm and plug up the entrances very tight with moss or green grass so that no bees can get out. The one on the original stand which has the queen should be treated in a similar way to the others except that the entrance must be left open. The bees should be disturbed as little as possible during manipulation so that very few will take wing, and an equal number be given to each nucleus. The four new nuclei should be left with the entrances closed with the moss until the bees gnaw their way out. By the time this takes place all will have become reconciled to their new hives and will not desert them to go back to their old one. If no bees appear at the end of a week, remove a very small part of the obstruction from the entrance, but do not entirely liberate them. By the time the bees have quite regained their liberty the queens will be ready for mating, and after they have begun to lay, the nuclei, including the one with the old queen, may all be gradually built up into full stocks, with the addition of more frames to keep pace with the increase of bees.

It is important that during the time of building up the nuclei should never be checked by want of food, and if, owing to rain or very dry weather, no honey is being gathered, feeding with syrup should be resorted to.

G. W. A.